

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1.-27. (canceled).

28. (currently amended) An isolated polypeptide comprising the amino acid sequence set forth in SEQ ID NO:31 for the production of a polyketide of Formula I comprising a domain of a polyketide synthase, wherein said polyketide synthase has an amino acid sequence of SEQ ID NOS: 21, 23, 25, 27, 29, 31, 33, 35 or 37.

29.-38. (canceled).

39. (new) An isolated polypeptide comprising an amino acid sequence having at least 95% identity to the amino acid sequence set forth in SEQ ID NO:31, and having polyketide synthase activity.

40. (new) An isolated polypeptide consisting of the amino acid sequence set forth in SEQ ID NO:31.

41. (new) A  $\beta$ -ketoacyl synthase (KS) domain of the polypeptide of SEQ ID NO:31 comprising a KS domain selected from the group consisting of: (i) the KS domain consisting of amino acids 35 to 460 of SEQ ID NO:31, (ii) the KS domain consisting of amino acid residues 1822 to 2247 of SEQ ID NO:31, (iii) the KS domain consisting of amino acid residues 3568 to 3993 of SEQ ID NO:31, and (iv) a .

42. (new) An acyl carrier protein (ACP) domain of the polypeptide of SEQ ID NO:31 comprising an ACP domain selected from the group consisting of: (i) the ACP domain consisting of amino acids 1737 to 1798 of SEQ ID NO:31, (ii) the ACP domain consisting of amino acid residues 3483 to 3544 of SEQ ID NO:31, and (iii) the ACP domain consisting of amino acid residues 5285 to 5346 of SEQ ID NO:31.

43. (new) An acyl transferase (AT) domain of the polypeptide of SEQ ID NO:31 comprising an AT domain selected from the group consisting of: (i) the AT domain consisting of amino acids 480 to 914 of SEQ ID NO:31, (ii) the AT domain consisting of amino acid residues

2263 to 2690 of SEQ ID NO:31, and (iii) the AT domain consisting of amino acid residues 4017 to 4442 of SEQ ID NO:31.

44. (new) A ketoreductase (KR) domain of the polypeptide of SEQ ID NO:31 comprising a KR domain selected from the group consisting of: (i) the KR domain consisting of amino acids 1423 to 1639 of SEQ ID NO:31, (ii) the KR domain consisting of amino acid residues 3188 to 3404 of SEQ ID NO:31, and (iii) the KR domain consisting of amino acid residues 4978 to 5194 of SEQ ID NO:31.

45. (new) A dehydratase (DH) domain of the polypeptide of SEQ ID NO:31 comprising a DH domain selected from the group consisting of: (i) the DH domain consisting of amino acids 926 to 1032 of SEQ ID NO:31, (ii) the DH domain consisting of amino acid residues 2703 to 2809 of SEQ ID NO:31, and (iii) the DH domain consisting of amino acid residues 4456 to 4562 of SEQ ID NO:31.